ABSTRACT OF THE DISCLOSURE

A combustion catalyst for removing organic compounds from a gas stream containing the same and a process for removing organic compounds from the gas stream using the catalyst are disclosed. The combustion catalyst comprises a first catalyst comprising a metal oxide containing at least one of the elements of the platinum group, and a second catalyst comprising a mixture of zeolite with a metal oxide containing at least one of the elements of the platinum group, in a manner such that the organic compounds are contacted first with the first catalyst and then with the second catalyst, whereby the organic compounds can be efficiently removed at a low temperature.